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वस्त्रादि मशीनरी—टू-फार-वन टिवस्टर—शब्दावली

Indian Standard

TEXTILE MACHINERY — TWO-FOR-ONE TWISTERS — VOCABULARY

ICS 59.120.10

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

November 2002

Price Group 2

Spinning Preparatory, Spinning and Doubling (Twisting) Machinery Sectional Committee, TX 5

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Spinning Preparatory, Spinning and Doubling (Twisting) Machinery Sectional Committee had been approved by the Textile Division Council.

This standard has been prepared to eliminate ambiguity and confusion arising from local interpretations of terms and expressions used for two-for-one twisters.

This standard is based on ISO 9947 : 1991 'Textile machinery and accessories — Two-for-one twisters — Vocabulary', issued by the International Organization for Standardization.

The composition of the Committee responsible for formulation of this standard is given in Annex A.

Indian Standard

TEXTILE MACHINERY — TWO-FOR-ONE TWISTERS — VOCABULARY

1 SCOPE

This standard defines terms for two-for-one twisters.

2 TERMS AND DEFINITIONS

2.1 Two-for-One Twister

Twisting machine for inserting turn of twist in the ratio 1:2, that is for one revolution of the two-for-one spindle, two turns of twist are inserted in the yarn.

The yarn is unwound from a stationary feed package, guided through the twisting spindle, twisted and finally wound onto a take-up package. To achieve the two-for-one effect, the yarn balloon is rotated around the stationary feed or take-up package.

The amount of twist, in turns per metre, is calculated according to the following formula:

$$\text{Twist} = \frac{2 \times \text{Spindle revolution (rev/min)}}{\text{Yarn speed (m/min)}}$$

2.2 Dimensions

The definitions of various dimensions are given in Table 1.

Table 1 Dimensions
(*Clause* 2.2 and *Fig.* 1)

Symbol (1)	Terms (2)	Definition (3)
l_1	Machine length	Overall machine length including all machine elements
w	Machine width	Overall machine width including all machine elements
h	Machine height	Overall machine height including all machine elements
*	Maximum operating height	Distance between floor and the highest operating level
*	Minimum operating height	Distance between floor and the lowest operating level
l_2	Machine section length	Distance from middle to middle of intermediate frame

* Not shown in Fig. 1.

2.3 Component Parts

The definitions of the component parts are given in Table 2.

Table 2 Component Parts
(*Clause* 2.3 and *Fig.* 1, 2 *and* 3)

No. (1)	Terms (2)	Definition (3)
1	Drive unit	Device consisting of main drive and elements for transmitting power
2	Control unit	Device consisting of gear elements with or without drive unit. Drive unit and control unit may form one unit
3	Intermediate frame	Intermediate machine support elements delimiting each machine section and serving as supporting part for the longitudinal parts of the machine
4	Spindle rail	Supporting part for rotor bearing
5*	Feed system	Yarn feed into the two-for-one spindle
6*	Two-for-one twisting spindle	Rotating part for inserting twist and a stationary part for carrying the feed package
6.1*	Feed package carrier	Fixed part of the two-for-one twisting spindle mounted within the yarn balloon for mounting the feed pacakge (*see* Fig. 2) or the take-up package (*see* Fig. 3)
6.1.1	Package pot	Stationary cover of feed package (*see* Fig. 2) or take-up package (*see* Fig. 3), similar to pot or basket, secured against rotation
6.1.2	Inlet guide	Yarn guide for leading the yarn to the rotor
6.1.3	Package holder	Holding part for creeling and fixing the feed package
6.1.4	Yarn tensioner	Stationary adjustable unit for tensioning the passing yarn, if necessary, with flyer to facilitate unwinding of yarn from the feed package
6.1.5	Winding unit	Unit consisting of take-up package and traversing yarn guide for winding a twisted thread, entering the twisting spindle from outside (*see* Fig. 3)
6.2*	Rotor	Rotating part for inserting twist
6.2.1	Wharve	Part for transmitting power to the rotor
6.2.2	Reserve disc	Disc-shaped element for storing a supply of yarn
6.2.3	Yarn deflection plate	Disc for deflecting the yarn around the stationary package carrier

Table 2 (*Continued*)

No. (1)	Terms (2)	Definition (3)
6.2.4	Spindle blade	Shaft mounted within the bearing part, fixed to the rotor and supporting the pacakge
6.3	Spindle bearing	Bearing for rotor between spindle rail and stationary package carrier
6.4	Balloon limiter	Device to limit the diameter of the yarn balloon
7*	Spindle drive	System for transmitting power to the rotor
8*	Spindle brake	Device for braking the rotor
9*	Winding device	Device for taking up the twisted yarn
9.1	Pre-take-up roller	Device regulating the tension of the thread being fed to the take-up pacakge
9.2	Package drive	Device for driving the pacakge

Table 2 (*Concluded*)

No. (1)	Terms (2)	Definition (3)
9.3*	Yarn guide	Fixed or mobile device for guiding the yarn
9.3.1	Yarn guide eye	Yarn guide at apex of yarn balloon
9.3.2	Traversing yarn guide	Yarn guide for producing a predetermined package shape
9.4	Cradle	Device for take-up of the rotating twisted yarn package with possibility of increasing or decreasing the pressure during winding
9.4.1	Cradle arm	Fixed or mobile part for carrying centring or bearing elements
9.4.2	Tube holder	Element for carrying and centring the take-up bobbins

* Not shown in the figures.

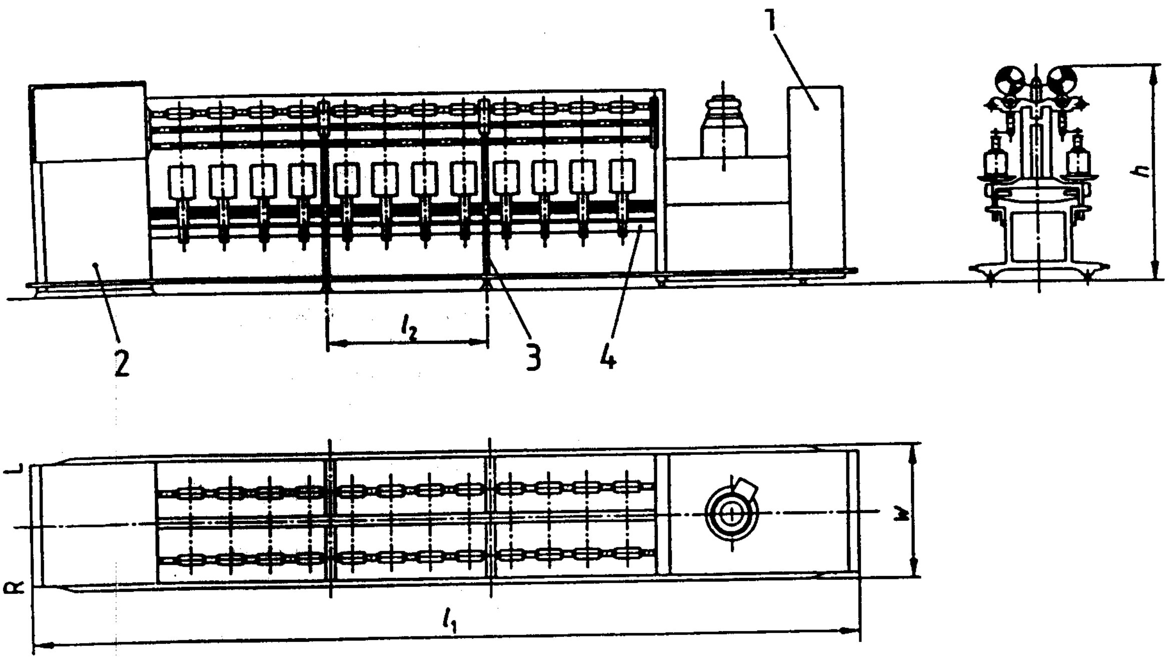

FIG. 1 TWO-FOR-ONE TWISTER

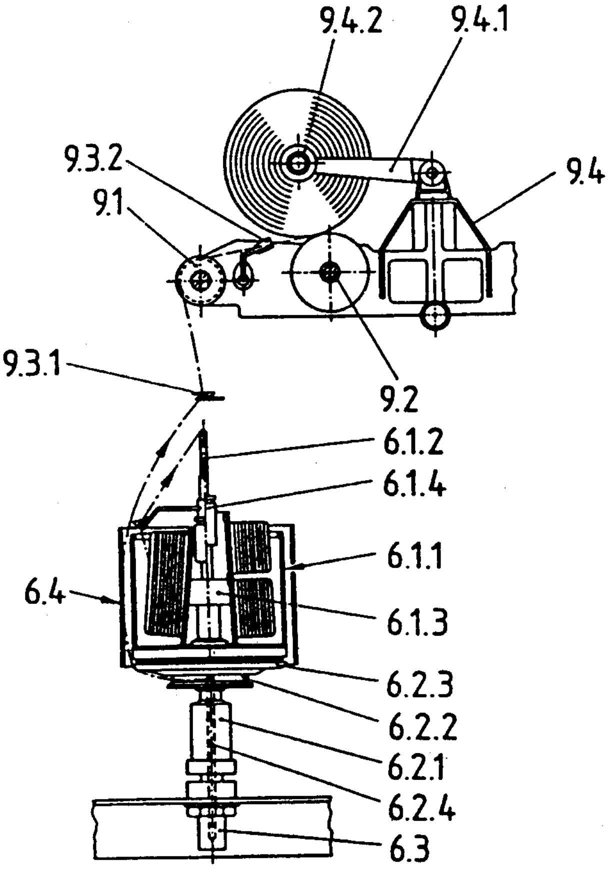

FIG. 2 SPINDLE WITH SEPARATE TAKE-UP

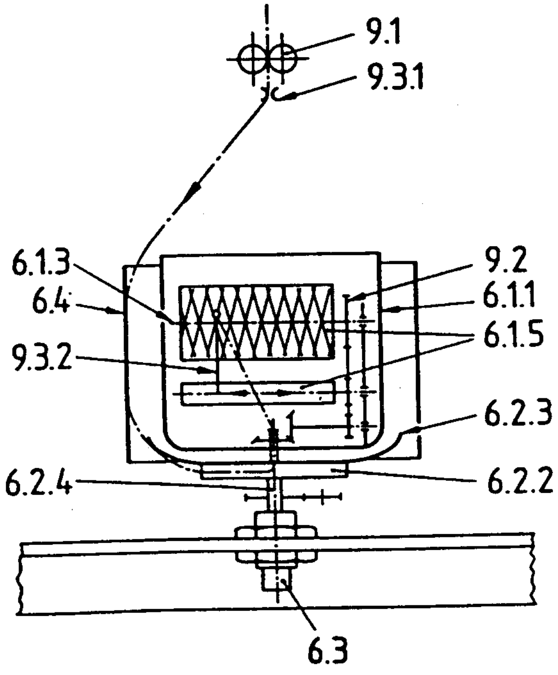

FIG. 3 SPINDLE WITH INTEGRATED TAKE-UP

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Spinning Preparatory, Spinning and Doubling (Twisting) Machinery
Sectional Committee, TX 15

Organization	*Representative(s)*
Lakshmi Machine Works Ltd, Coimbatore	Shri K. B. Krishnan (***Chairman***)
Kunal Engineering Co Ltd, Chennai	Shri S. Kandavel Shri S. Adinathan (*Alternate*)
Padmatex Engineering Ltd, Mumbai	Shri A. K. Kalyanraman
Cassa Group, Ahmedabad	Shri Madan Saluja
New Standard Engineering Co Ltd, New Delhi	Shri M. S. Anand Shri S. N. Krishnan (*Alternate*)
The Bombay Textile Research Association, Mumbai	Shri A. N. Desai Shri B. P. Todankar (*Alternate*)
Veermata Jijabai Technological Institute, Mumbai	Dr H. V. S. Murthy
The Textile & Allied Industries Research Organization, Vadodara	Dr Rumy J. Mistry Shri Vishwanath A. Bangalore (*Alternate*)
Ahmedabad Textile Industry's Research Association, Ahmedabad	Shri A. K. Agrawal
The South India Textile Research Association, Coimbatore	Shri P. Muthukumaraswamy
Association of Merchants & Manufacturers of Textile Stores & Machinery, Mumbai	Shri G. T. Dembla Shri J. K. Bajaj (*Alternate*)
The Simplex Mills Co Ltd, Mumbai	Shri S. R. Pawar
The Southern India Mills' Association, Coimbatore	Shri K. Selvaraju
The Textile Association (India), Mumbai	Representative
Ahmedabad Textile Mills Association, Ahmedabad	Shri G. B. Patil
Textiles Committee, Mumbai	Shri D. P. Jadeja Shri Harbhajan Singh (*Alternate*)
Office of the Textile Commissioner, Mumbai	Shri S. P. Ghosh Shri S. Chakrabarty (*Alternate*)
The Khatau Makanji Spinning & Weaving Co Ltd, Mumbai	Shri P. T. Shastri Shri P. D. Naterwalla (*Alternate*)
Century Textiles & Industries Ltd, Mumbai	Shri P. M. Nevatia Shri V. Ramachandran (*Alternate*)
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Barmag India Pvt Ltd, Mumbai	Shri K. M. Thanawalla Shri S. K. Mukhopadhyay (*Alternate*)
Indian Institute of Technology, Delhi	Prof S.M. Ishtiaque Prof. R. Chattopadhyay (*Alternate*)
Lohia Machinery Manufacturers, Kanpur	Shri S. C. Sachan Shri P. K. Bhunia (*Alternate*)
Man-Made Textiles Research Association, Surat	Dr T. V. K. Srivastava Shri H. U. Bhonde (*Alternate*)
Synthetic and Art Silk Mills' Association Ltd, Mumbai	Shri V. S. Chalke
BIS Directorate General	Shri P. Bhatnagar, Director & Head (TXD) [Representing Director General (*Ex-officio*)]

Member Secretary
Shri Arun Singh
Joint Director (TXD), BIS

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This Indian Standard has been developed from Doc: No. TX 15 (0081).

Amendments Issued Since Publication

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Printed at Simco Printing Press, Delhi